IN THE CLAIMS:

Please amend Claims 29 through 31, to read as follows.

1-16. (Canceled)

17. (Previously Presented) An apparatus comprising:

a mirror having a reflection surface that reflects light;

a heat-radiation plate arranged facing and spaced away from said reflection surface of said mirror and arranged outside a passage area for light to be incident on and reflected from said reflection surface; and

a cooler configured to cool said heat-radiation plate.

18. (Previously Presented) An apparatus according to claim 17, further comprising a thermometer configured to detect a temperature of said mirror, wherein said cooler is configured to cool said heat-radiation plate based on the detection obtained by said thermometer.

19. (Previously Presented) An apparatus according to claim 17, wherein said heat-radiation plate is separated and arranged at plural positions so as to comprise separated plural heat-radiation plates.

20. (Previously Presented) An apparatus according to claim 19, wherein the passage area is arranged between said separated plural heat-radiation plates.

21. (Previously Presented) An apparatus according to claim 19, wherein one of said separated plural heat-radiation plates is arranged facing said reflection surface of said mirror, and another of said separated plural heat-radiation plates is arranged facing an outer surface, of said mirror, said outer surface being different from said reflection surface.

22. (Previously Presented) An apparatus according to claim 17, wherein said heat-radiation plate has a form corresponding to a form of said reflection surface of said mirror.

23. (Previously Presented) An apparatus according to claim 19, wherein said cooler is configured to cool said separated plural heat-radiation plates individually.

24. (Previously Presented) An apparatus according to claim 17, wherein said cooler is configured to cool said heat-radiation plate by circulating coolant.

25. (Previously Presented) An apparatus according to claim 24, wherein said cooler includes:

a first thermometer configured to measure the temperature of said mirror;

a second thermometer configured to measure temperature of the coolant; and

a controller configured to estimate an amount of the light incident on said mirror to obtain an estimated amount of the light and to control temperature of the coolant based on measurement obtained by said first thermometer and said second thermometer and the estimated amount of the light.

26. (Previously Presented) An apparatus according to claim 25, wherein said first thermometer is a radiation thermometer arranged away from said mirror.

27. (Previously Presented) An apparatus according to claim 17, wherein said cooler includes:

a solid heat-transfer element attached to said heat-radiation plate and configured to transfer heat from said heat-radiation plate; and

a circulator configured to circulate coolant so as to cool said solid heat-transfer element.

28. (Previously Presented) An apparatus according to claim 17, further comprising:

a mirror barrel configured to accommodate said mirror;

a mirror support fixed to said mirror barrel and configured to support said mirror in said mirror barrel; and

a heat-radiation plate support fixed to said mirror barrel and configured to support said heat-radiation plate in said mirror barrel.

29. (Currently Amended) An exposure apparatus for exposing a substrate to light via a reticle, said apparatus comprising:

a mirror [an] apparatus comprising a mirror having a reflection surface that reflects light, a heat-radiation plate arranged facing and spaced away from said reflection surface of said mirror and arranged outside a passage area for light to be incident on and reflected from said reflection surface, and a cooler configured to cool said heat-radiation plate ~~as~~

~~defined in claim 17~~, wherein said mirror is configured and positioned to guide the light to the substrate.

30. (Currently Amended) An exposure apparatus according to claim 29, wherein said mirror apparatus ~~as defined in claim 17~~ is a constituent element of one of a light source apparatus configured to generate the light, an illumination apparatus configured to guide the light from a light source to the reticle, and a projection apparatus configured to project the light from the reticle to the substrate.

31. (Currently Amended) A method of fabricating a device, said method comprising steps of:

exposing a substrate to light via a reticle using an exposure apparatus for exposing a substrate to light via a reticle, the apparatus comprising a mirror having a reflection surface that reflects light, a heat-radiation plate arranged facing and spaced away from the reflection surface of the mirror and arranged outside a passage area for light to be incident on and reflected from the reflection surface, and a cooler configured to cool the heat-radiation plate, wherein the mirror is configured and positioned to guide the light to the substrate ~~as defined in claim 29~~;

developing the exposed substrate; and

processing the developed substrate to fabricate the device.